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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,330	03/28/2001	Akira Matsumoto	939_023	4237

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EXAMINER

PATEL, TULSIDAS C

ART UNIT PAPER NUMBER

2839

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,330

Applicant(s)

MATSUMOTO ET AL.

Examiner

T. C. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

General Status

1. This is a Final Action on the Merits for RCE. Claims 1-17, are pending in the case.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US 4,875,969) in view of EP 943, 942.

For claims 1, 5, 10 and 17, Hsu, in figures 1 and 2 discloses fiber optic array comprising a holding member 17 including a substrate with flat surface on opposite sides of a group of V-shaped grooves 28b formed therein, the outermost fiber 33, which is 100 microns in diameter (see Table-I), is disclosed to be distanced from the edge of the base plate and it would be obvious for one of ordinary skill in the art to make the first groove more than 5 times the radius of the fiber away from the edge so as to obtain sufficient support surface for the cover plate. The pitch between the grooves is disclosed to be 150 microns. Grooves are 70 degree grooves (also see sketch-2 previously attached) and the calculated distance L is $R \cdot \sin 45^\circ + R$ or 78.68 microns and height of adhesive or 'Y' is 32.92 microns and therefore, value of Y satisfies the equation $L/6 \leq Y \leq L/2$. However, Hsu does not disclose meniscus

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formed between the opposed side of the cover plate and the flat surface of the substrate. EP 943 942, in figure 5 discloses a meniscus formed between the side surfaces of the cover plate and the substrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the cover plate smaller than the substrate as taught by EP '942, so that adhesive reliability and strength can be improved (EP '942, paragraph 0043). Please note that the adhesive extends to the side surface of the cover plate above the bottom surface of the cover plate and therefore, the height of the meniscus is greater than the thickness of the adhesive Y.

For claim 2, the amount to which the fiber protrude above the surface is the same as the distance between the substrate 17 and cover plate 21 (Hsu, figure 2). For claims 3 and 7, the thickness relationship $L/4 \leq Y \leq L/2$ OR $(19.67 \leq 32.92 \leq 39.34)$ is also satisfied with the dimensions calculated in the sketch-2. For claims 4, 8 and 9, the adhesive disclosed is epoxy based (HSU, column 3, line 44).

For claims 6 and 13-15, Hsu does not disclose a step between a placement face and a rear part groove forming face and width of cover plate being different than the holding member. EP 943 942, in figure 1 discloses a step portion between a placement face and a rear part groove forming face and in figure 5, discloses cover plate being different than the holder and also discloses a step at 58.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a step between the placement face and rear face of the base plate as well as provide width of cover plate different than the base plate for the device of Hsu as taught by EP '942, so as to lay the fiber in the base plate in an aligned manner between the rear part with

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jacket and the front part of the optical fiber without jacket and also provide cover plate having width different than the base plate for soldering the cover plate with the base plate or holder.

Response to Arguments

4. Applicant's arguments filed 9/8/03 have been fully considered but they are not persuasive. The Applicant amended claims 1, 3 and 7 and added claim 17. The amendment to claim 1, added limitations related to meniscus produced by the adhesive between the substrate and the cover plate. The EP '952, reference in figure 5, discloses meniscus formed by the adhesive between the side of the cover plate and the substrate. The Examiner has changed the rejection accordingly and now claim 1 has been rejected on combination of Hsu and EP '942 references. All the claim limitations are met.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Change of Address

6. Effective May 1, 2003, the United States Patent and Trademark Office has a new Commissioner for Patents address. Correspondence in patent-related matters to organizations reporting to the Commissioner for Patents must now be addressed to:

Commissioner for Patents
P.O. Box 1450
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Hand-delivered of responses should be brought to:

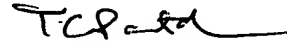
Crystal Plaza-4, Fourth floor (receptionist)
2201 South Clark Place, Arlington, Virginia

7. Any inquiry concerning this-communication or earlier communications from the examiner should be directed to T. C. Patel whose telephone number is (703) 308-1736 OR (703) 272-2098 (after January 30, 2004). The examiner can normally be reached on 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (703) 308-2710 OR (703) 272-2092 (after January 30, 2004). The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



T. C. Patel
Primary Examiner
Art Unit 2839

tcp
December 21, 2003